SEIKO ASTRON

2014 CATALOGUE



SEIKU History	4
The SEIKO Website	6
About this Guide	
Water Resistance Usage	8
Abbreviations	9
GPS Solar	10
Astron Limited Edition GPS Solar Chronograph	12
Astron GPS Solar Chronograph	
Astron GPS Solar	16
Product Information Matrix	18
Operating Instructions	20
Contacts	
Service Information	23
Index	24



- **1881** K. Hattori, predecessor of today's Seiko Holdings Corporation, established.
- 1892 Seikosha clock supply factory established; production of wall clocks begins.
 Seikosha builds the first pocket watch.
- 1913 Production of Laurel, the first wristwatch made in Japan begins.
- 1953 SEIKO sponsors Japan's first TV commercial.
- 1959 SEIKO commercializes quartz clocks for broadcasting use.
- 1964 SEIKO develops the portable quartz chronometer and Seiko serves as Official Timer for the "Games of the XVIII Olympiad" held in Tokyo.

- 1968 SEIKO achieves the highest ever score in the Geneva competition and is awarded the "best mechanical wrist chronometer".
- 1969 Introduction of cal. 6139, the world's first automatic chronograph watch equipped with both vertical clutch and column wheel.
 Introduction of the world's first quartz watch,
 "SEIKO Quartz Astron" cal. 3500.
- 1982 Introduction of the world's first TV watch cal. T001.
- **1988** Introduction of the world's first "Auto Quartz" watch cal. 7M42. (later renamed as "Kinetic").
- **1992** Introduction of 1/100th analogue quartz chronograph watch cal. 7T59.



1999 Introduction of the world's first Spring Drive watch cal. 7R68 (hand winding).

Introduction of the Ultimate Kinetic Chronograph cal. 9T82.

2005 Introduction of the Kinetic Perpetual cal. 7D48.
Introduction of the Spring Drive cal. 5R series
(automatic winding).

2006 Introduction of the world's first watch with electrophoresis display module cal. G510.

Introduction of the Credor Spring Drive Sonnerie cal. 7R06. Suggested retail price: 15 million Japanese Yen.

2007 Introduction of the Kinetic Direct Drive cal. 5D44.
Introduction of the Spring Drive Chronograph cal. 5R86 equipped with both vertical clutch and column wheel.

2009 Introduction of the Chronograph Perpetual.

2010 World's first EPD watch with an active matrix system.

2011 SEIKO's 130th Anniversary

Served as Official Timer of the IAAF World Championships

Daegu 2011.

2012 SEIKO introduces the world's first Solar Powered GPS watch that supports all internationally recognised timezones.

2013 100 years of SEIKO Wrist watches marked by a collection of Special Edition models.

2014 SEIKO introduces the world's first Solar GPS watch with a chronograph.

The SEIKO website is designed to provide customers, retailers and consumers with instant access to information about SEIKO. Log onto www.seiko.com.au and click the following links to find out all there is to know about the world's leading watch manufacturer.

Products – Learn more about the SEIKO Premium Collection or explore the entire SEIKO product range.

Support – Designed with retailers in mind, this section provides service information, instruction manuals you can download and 'frequently asked questions' to aid in trouble shooting, procedures for sending back repairs for prompt and efficient service.

About Us – Discover SEIKO's history from humble beginnings in 1881 and the rise that carried SEIKO to new heights and international renown. Learn about corporate structure, global networks and SEIKO's extensive involvement in sports timing.

Corporate – This section outlines specialised services that include the printing of company logos on the dial of a watch or clock, engraving and personalised messages, as well as customised packaging and more.

SEIKO will continue to grow and evolve and so too will www.seiko.com.au, so keep checking for regular updates. Please send any comments you have to info@seiko.com.au, all feedback is welcome.

www.seiko.co.nz

BELOW ARE THE ABBREVIATIONS AND SYMBOLS YOU WILL FIND IN THIS CATALOGUE



SSE003J \$4900 ———	Reference number and price
GPS SOLAR CHRONOGRAPH ———	Watch type
TCE.TIHICDCWR (10BAR)	Case material (refer to Abbreviations page)
SAPPHIRE GLASS ————	Glass type
M0VR111H0 ————	Band reference
8X82 —	Calibre Number















						DIVERS	DIVERS				
EVERYDAY LIFE (International Standard ISO 2281) Recommended Usage											
Splash Resistant	•	•	•	•	•	•	•				
Rain Resistant	•	•	•	•	•	•	•				
SWIMMING/WATERSPORTS (Internat	SWIMMING/WATERSPORTS (International Standard ISO 2281) Recommended Usage										
Water-related Work		•	•	•	•	•	•				
Swimming		•	•	•	•	•	•				
Watersports (Snorkelling, Surfing, etc)			•	•	•	•	•				
DIVING (International Standard ISO 6425) Recommended Usage											
Scuba Diving						•	•				
Saturation Diving							•				

AHC	All Hard Coat case and back
ASG	All SEIKO Gold Plated case
ALSGP	All Light SEIKO Gold Colour Plated case
ATI	All Titanium case
CE	Ceramics
FRP	Fibre Reinforced Plastic
GPDP	Combined SGP and PDP middle with bezel and SS back
GPHC	Combined SGP and HC middle with bezel and SS back
нс	Hard Coating SS middle with bezel and SS back
HC.SSHC	HC bezel and middle with combined SS and HC back
HGC	Hard Gold Coating middle with bezel and SS back
LSGP	Light colour SGP
мнс	HC middle with SS bezel and back
MSSGP	SS bezel, combined SS and SGP middle and SS back
MSSPCD	SS bezel combined SS and plastic middle with SS back
MSS.HC	SS middle with HC bezel and back
PDP	Palladium plated middle with bezel and SS back
SGP	SEIKO Gold Colour Plate and Stainless Steel back
SS	Stainless Steel case
SSGP	Combined SS and SGP middle with bezel and SS back
SSHC	Combined SS and HC middle with bezel and SS back
TGPCE.MGP	Combined SGP and Ceramic bezel, SGP middle and SS back
TGP.MGPHC	SGP bezel, SGP and HC middle and SS back
TGP.MSSGP	SGP bezel, combined SS and SGP middle and SS back
TGPDP	Combined SGP and PDP bezel, SS middle and SS back
TGPTI.TI	Combined TI and SGP bezel, TI middle and TI back
THC	HC bezel, SS middle and SS back
THC.BTI	HC bezel, BTI (Bright Titanium) middle and BTI back
THC.MHCPCDP	HC bezel, combined HC and plastic middle with SS back
THC.TIHCCE	CE Outer Case, TI HC Inner Case
THGMCETIHG	HGC bezel, combined Ceramics, TI and HGC middle and combined Ceramics, TI and HGC back
TI	Titanium
TPDP	PDP bezel, SS middle and SS back
TSGP	Combined SS and SGP case and SS back
TSSCE	Combined SS and Ceramic bezel , SS middle and SS back
TSSGP	Combined SS and SGP bezel, SS middle and SS back
TSSHC	Combined SS and HC bezel, SS middle and SS back
TTIHC.MTIHICDC.TI	Ti & HC bezel, Ti & HC middle, Ti Back
TTIHC.TI	Combined TI and HC bezel, TI middle and TI back
WR	Water Resistant
XL	Lumibrite hands and hour markers

ACCURATE TIME, HARNESSING THE POWER OF GPS

Once a day when fully charged, Seiko Astron receives the time signal automatically and, on demand, connects to four or more of the GPS satellites that orbit the earth*1, thus pinpointing its position and identifying the time zone and the exact time*2*3. The hands adjust automatically to the correct local time with atomic clock precision.

NO BATTERY CHANGE NEEDED. EVER

Astron is entirely self-sustaining and takes all the power it needs just from light. There is no need, ever, to change a battery.



PERPETUAL CALENDAR CORRECT UP TO FEBRUARY 2100

Astron has a perpetual calendar that is accurate up to February 2100, irrespective of leap years.

IN-FLIGHT MODE(→)

In order to avoid any interference with the operation of electronic devices in an airplane, in-flight mode is available when boarding a plane. In the in-flight mode, the GPS signal reception function will not work.

DAYLIGHT SAVING TIME (DST) FUNCTION

In areas where Daylight Saving Time (DST) applies, the time can be adjusted manually.

MULTI-INDICATOR

The multi-indicator has four functions:

- GPS signal reception display
- Power reserve indication
- ■In-flight mode(→) on/off indication
- DST (Daylight Saving Time) on/off indication



THE WORLD'S FIRST GPS SOLAR WATCH

Thanks to the creation of an ultra-low consumption GPS module, Seiko has been able to create a watch that can receive GPS signals and identify time zone, time and date using the global network of GPS satellites. This breakthrough timepiece inherits the name of the Astron. Like its celebrated 1969 predecessor which was the world's first quartz watch, the new Astron ushers in a new age of timekeeping technology.



THE SECRET IS IN ENERGY MANAGEMENT

Only Seiko's advanced energy-efficiency technology could invent the miniature GPS receiver that requires so little energy to receive GPS signals from four or more satellites. And only Seiko's advanced IC circuitry expertise could make it possible for watch to see the world as divided into one million 'squares' and allocate a time zone to each.

SEIKO'S HISTORY OF ENERGY MANAGEMENT

- 1969: The first Astron was the world's first quartz watch. It was made possible by a low-drain stepping motor.
- 1977: Seiko made its first ever solar watch, using just the power of light.
- 1988: Seiko Kinetic was the first watch to convert mechanical energy into electrical with a rotor that spins at up to 100,000 rpm.
- 1999: A mechanical watch with a new type of escapement, Spring Drive is a technology unique to Seiko. It uses so little electrical power that, if everyone on earth wore Spring Drive, the total energy used would power just one light bulb.
- 2012: The new Astron: The world's first GPS solar watch, which is so energy efficient that it can connect to the GPS network using just the power of light.
- *1 The watch has to be under an open sky with good visibility, where the GPS signals can easily be received.
- *2 Cal.7X52: Time zone data as of January 2012. Cal.8X82: Time zone data as of January 2014. Changes to time zones occurring after these dates are not programed and manual adjustment may be required.
- *3 If the time zone is adjusted near a time zone boundary, the time of the adjacent time zone may be displayed. To adjust the time zone, use the manual time zone(city) selection mode.



SSE001J \$7000









GPS SOLAR CHRONOGRAPH, TCE.TIHICDCWR, (10BAR), XL, SAPPHIRE GLASS, LIMITED EDITION 7000 PIECES WORLDWIDE, M0VX118H0, 8X82



Button shaped for smooth fitting by Seiko original processing



Titanium bracelet with black ceramic bracelet and super-hard



Black ceramic bezel with 12 specially cut facets



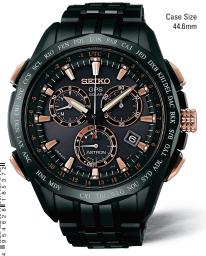
Crown with special "lighter cut"



Laser marked GPS SOLAR logo and serial number



Additional crocodile strap and special gift box



SSE019J \$6600







GPS SOLAR CHRONOGRAPH, TCE.TIHCWR, (10BAR), XL, SAPPHIRE GLASS, LIMITED EDITION 3000 PIECES WORLDWIDE, M0VX119M0, 8X82

NOVAK DJOKOVIC LIMITED EDITION







SSE022J \$3600











GPS SOLAR CHRONOGRAPH, TCE.HCWR, (10BAR), XL, SAPPHIRE GLASS, LIMITED EDITION 2500 PIECES WORLDWIDE, R01Z011P0, 8X82



GPS SOLAR CHRONOGRAPH, TCE.THICDCWR, (10BAR), XL, SAPPHIRE GLASS, LIMITED EDITION 1000 PIECES WORLDWIDE, 10 DIAMONDS, SPECIAL EFFECT DIAL, LOCK012J9, 8X82





















Case Size 44.6mm





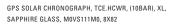
GPS SOLAR CHRONOGRAPH, TCE.TIHCWR, (10 BAR), XL, SAPPHIRE GLASS, MOVR111M0, 8X82

GPS SOLAR CHRONOGRAPH, TCE.TIHICDCWR, (10BAR), XL, SAPPHIRE GLASS, MOVR111H0, 8X82

SAPPHIRE GLASS, MOVR111H0, 8X82

14







GPS SOLAR CHRONOGRAPH, TCE.HICDCWR, (10BAR), XL, SAPPHIRE GLASS, MOVS111H0, 8X82



GPS SOLAR CHRONOGRAPH, TCE.HCWR, (10BAR), XL, SAPPHIRE GLASS, R01Z011M0, 8X82

GPS SOLAR



SAST015G \$4700 😊 🖸 🕕

M0SP117T9, 7X52











SAST017G \$4700 😊 🖸 🛈 🌟









GPS SOLAR, TCE.BTIWR, (10BAR), XL, SAPPHIRE GLASS, M0SP117T9, 7X52



SAST007G \$4400 🔓 🖸 🛈 🔆 GPS SOLAR, TCE.BTIHCWR, (10BAR), XL, SAPPHIRE GLASS,

M0PS113M9, 7X52















Case Size 47mm

GPS SOLAR, TCE.BTIWR, (10BAR), XL, SAPPHIRE GLASS, M0PS113T9, 7X52













R02M013M9, 7X52











SAST009G \$3200 😊 🕝 S 🔆



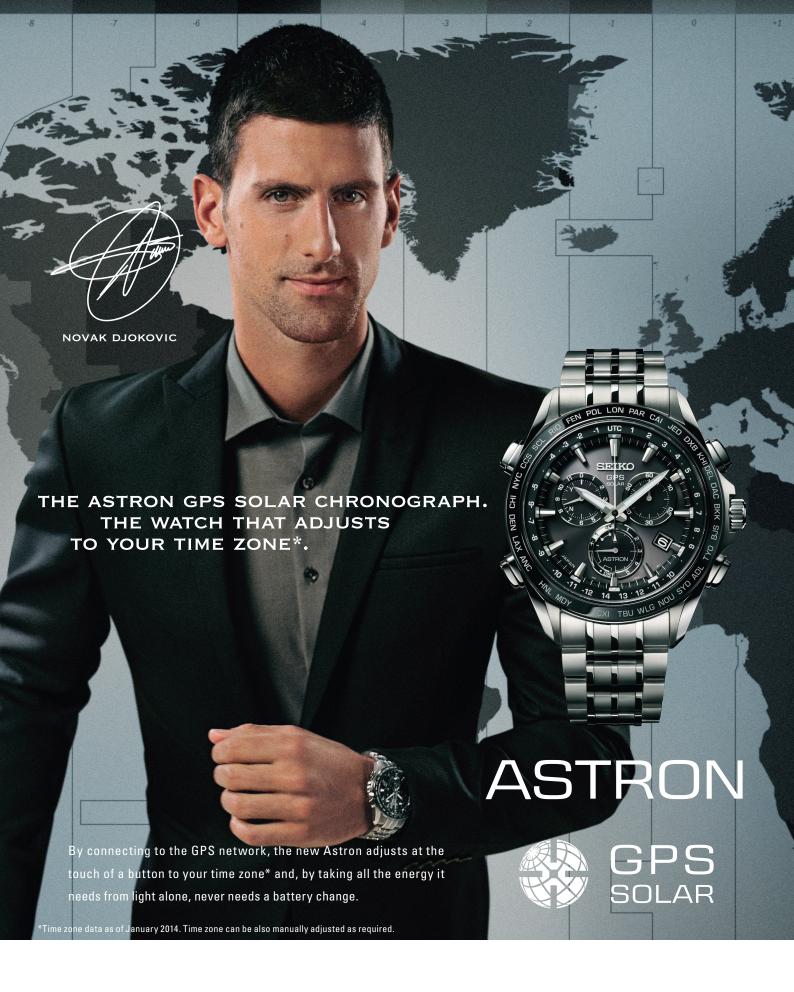






Case Size 47mm

GPS SOLAR, TCEWR, (10BAR), XL, SAPPHIRE GLASS, R02M013J9, 7X52





DEDICATED TO PERFECTION

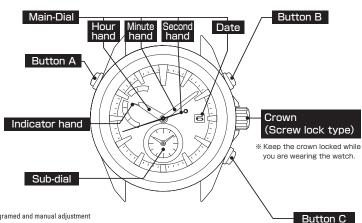
Model Number	Collection	Calibre Type	Calibre Function	Power Reserve/Battery Life	Battery Type	Calibre Number	Display	Water Resistance	Band Reference	Glass Type	Crown	Rotating Bezel	Hand Indicators	Calendar Indicators	Lumibrite	Stone Set Type	Stone Set Oty
SAST003G	Astron	Solar - Powered By Any Light Source	GPS	4 Years Power Reserve	N/A	7X52	Analogue	100 Metres	M0PS113T9	Sapphire	Screw Down		Hour, Minute, Seconds	Date	Hands & Markers		
SAST007G	Astron	Solar - Powered By Any Light Source	GPS	4 Years Power Reserve	N/A	7X52	Analogue	100 Metres	M0PS113M9	Sapphire	Screw Down		Hour, Minute, Seconds	Date	Hands & Markers		
SAST009G	Astron	Solar - Powered By Any Light Source	GPS	4 Years Power Reserve	N/A	7X52	Analogue	100 Metres	R02M013J9	Sapphire	Screw Down		Hour, Minute, Seconds	Date	Blue - Hands & Markers		
SAST015G	Astron	Solar - Powered By Any Light Source	GPS	4 Years Power Reserve	N/A	7X52	Analogue	100 Metres	M0SP117T9	Sapphire	Screw Down		Hour, Minute, Seconds	Date	Hands & Markers		
SAST017G	Astron	Solar - Powered By Any Light Source	GPS	4 Years Power Reserve	N/A	7X52	Analogue	100 Metres	M0SP117T9	Sapphire	Screw Down		Hour, Minute, Seconds	Date	Hands & Markers		
SAST021G	Astron	Solar - Powered By Any Light Source	GPS	4 Years Power Reserve	N/A	7X52	Analogue	100 Metres	M0SR113J9	Sapphire	Screw Down		Hour, Minute, Seconds	Date	Hands & Markers		
SAST025G	Astron	Solar - Powered By Any Light Source	GPS	4 Years Power Reserve	N/A	7X52	Analogue	100 Metres	R02M013M9	Sapphire	Screw Down		Hour, Minute, Seconds	Date	Orange - Hands & Markers		
SSE001J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	M0VX118H0/ L0CK011J9	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers		
SSE003J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	M0VR111H0	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers		
SSE007J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	M0VR111H0	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers		
SSE009J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	M0VR111M0	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers		
SSE011J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	M0VS111H0	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers		
SSE013J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	M0VS111M0	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers		
SSE017J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	R01Z011M0	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers		
SSE019J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	M0VX119M0	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers		
SSE021J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	LOCK012J9	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers	Diamonds	10
SSE022J	Astron	Solar - Powered By Any Light Source	GPS Chronograph	4 Year Power Reserve	N/A	8X82	Analogue	100 Metres	R01Z011P0	Sapphire	Pull Out		Hour, Minute, Seconds	Date	Hands & Markers		

^{*7}X: Time zone data as of January 2012. Changes to time zones occurring after this date are not programmed and manual adjustment may be required.
*8X: Time zone data as of January 2014. Changes to time zones occurring after this date are not programmed and manual adjustment may be required.

Model Number	Alarm	Stopwatch	Dual Time Capability	Timer	Perpetual Calendar	Compass	Tachymetre	Telemeter	Slide Rule	World Time	Hand Winding Capability	Power Reserve Indicator	Exhibition Case Back
SAST003G			Bottom Dial Can Be Adjusted To Second Time Zone, Main Hands Can Be Manually Adjusted To Different Time Zones		Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SAST007G			Bottom Dial Can Be Adjusted To Second Time Zone, Main Hands Can Be Manually Adjusted To Different Time Zones		Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SAST009G			Bottom Dial Can Be Adjusted To Second Time Zone, Main Hands Can Be Manually Adjusted To Different Time Zones		Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SAST015G			Bottom Dial Can Be Adjusted To Second Time Zone, Main Hands Can Be Manually Adjusted To Different Time Zones		Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SAST017G			Bottom Dial Can Be Adjusted To Second Time Zone, Main Hands Can Be Manually Adjusted To Different Time Zones		Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SAST021G			Bottom Dial Can Be Adjusted To Second Time Zone, Main Hands Can Be Manually Adjusted To Different Time Zones		Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SAST025G			Bottom Dial Can Be Adjusted To Second Time Zone, Main Hands Can Be Manually Adjusted To Different Time Zones		Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE001J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE003J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE007J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE009J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE011J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100		Yes			Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE013J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100		Yes			Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE017J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100		Yes			Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE019J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE021J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	
SSE022J		Stopwatch Measures 6 hours In 1/5th Of A Second Increments			Calendar Automatically Adjusts Or Short Months and Leap Years Until February, 2100					Astron can receive GPS signals to identify time zone, time and data using satellites. World Time Zones can also be set manually.*		Yes	

SOLAR GPS (7X52)

- · Solar Powered by any light source.
- GPS Connectivity Connect to satellites to pinpoint your position and adjust timezone accordingly*
- Flight Mode turn on and off during flights.
- Perpetual Calendar Adjusts the date automatically until February 2100 including leap years and short months
- World Time
- Power Save Mode Astron sleeps when not in sufficient light to conserve energy, and when exposed to light will wake up and relay to the current time.
- * Time zone data as of January 2012. Changes to time zones occurring after this date are not programed and manual adjustment may be required.



HOW TO ADJUST TIME USING GPS SIGNALS

- Ensure you are outdoor under an open sky with good visibility. Away from trees, buildings bridges etc. Ensure Astron is out of flight mode follow the steps detailed later in this guide.
- Press and hold BUTTON B. The second hand will move to the 60 second mark and stop briefly. It will then move to the 30 second mark. Once the second hand moves to the 30 second mark release BUTTON B.
- 3. The second hand will then move around the dial pointing at the hour marker to indicate how many satellites it is connected to e.g. the 2nd hour marker is 2 satellites, the 4th hour marker is 4 satellites. A minimum of 4 satellites is required for a successful timezone adjustment. The GPS Signal and Time change can take up to 2 minutes.
- 4. After Astron connects to satellites the second hand will move to Y for a successful connection, or N for an unsuccessful connection. The Y & N are indicated on the right side of the inner ring between the 2 and 3 hour marker, and the 3 and 4 hour marker respectively.
- 5. The main hands on Astron will move to the correct time based on your position.

LEAP SECOND ADJUSTMENT

The leap second is to compensate for deviations from the universal time (UT) which is astronomically determined and the 'International Atomic Time (TAI'. 1 second may be added/deleted once a year or every few years.



The indicator hand displays as shown above when GPS signals are received. At this time the second hand points to any of the 0-18-second positions to indicate the waiting time until the leap second data reception in minutes.

After the leap second data update Astron will continue with the GPS time adjustment.

MANUAL TIME ADJUSTMENT & WORLD TIME FUNCTION

In places where the GPS timezone change is not possible Astron can be set manually without the need to connect to a satellite. This function can also be used as a World Timer.

- 1. Press and hold BUTTON C. The second hand will move to the current timezone.
- 2. Press BUTTON B to advance timezones or press BUTTON C to decrease timezones. The second hand will move and point to the next timezone detailed

- on the inner ring, or city detailed on the bezel (model dependant) and instantly move the hands to that timezone.
- 3. Once you have selected your desired timezone press BUTTON A.

Use the below table to discover world timezones.

The following lists show the relationship between displays of the bezel and dial ring and time difference from the UTC. Please refer to the second hand positions below to set the time zone or to check the time zone setting. The time zone of each region is as of January 2012.

Daylight Saving Time (DST) is in effect in time zones with a ★ mark.

In the Lord Howe Island time zone in Australia with a ★ mark, the time is advanced by 30 minutes while Daylight Saving Time (Summer Time) is in effect.

Display of time zone Representative city names26	City code	Position of the second hand	City name	UTC ± hours	City code	Position of the second hand	City name	UTC ± hours	City code	Position of the second hand	City name	UTC ± hours	
cities among the total of 39 time	UTC/LON	0 second	★London	0	BJS	17 second	Beijing	+8	HNL	37 second	Honolulu	-10	
Time difference+14 hours ~ -12	PAR	2 second	★Paris/★Berlin	+1	TYO	19 second	Tokyo	+9	-	39 second	Marquesas Islands	-9.5	
hours Check the time zone → P. 16	CAI	4 second	★ Cairo	+2	-	20 second	* Adelaide	+9.5	ANC	41 second	★ Anchorage	-9	
[Time Zone Adjustment] → P. 14 ~ 15	JED	6 second	Jeddah	+3	SYD	21 second	★ Sydney	+10	LAX	43 second	★ Los Angeles	-8	
	-	7 second	★ Tehran	+3.5	-	22 second	☆Lord Howe Island	+10.5	DEN	45 second	★ Denver	-7	
F SECINO 1	DXB	8 second	Dubai	+4	NOU	23 second	Nouméa	+11	CHI	47 second	★ Chicago	-6	
	-	9 second	Kabul	+4.5	-	24 second	Norfolk Island	+11.5	NYC	49 second	★ New York	-5	
	KHI	10 second	Karachi	+5	WLG	25 second	★Wellington	+12	-	50 second	Caracas	-4.5	
	DEL	11 second	Delhi	+5.5	-	27 second	Chatham Islands	+12.75	SCL	51 second	★Santiago	-4	
	-	12 second	Kathmandu	+5.75	TBU	28 second	Nuku'alofa	+13	-	52 second	★St. John's	-3.5	
	DAC	13 second	Dhaka	+6	-	30 second	Kiritimati	+14	RIO	53 second	★ Rio de Janeiro	-3	
	-	14 second	Yangon	+6.5	-	33 second	Baker Island	-12	FEN	55	Fernando de	-2	
	BKK	15 second	Bangkok	+7	MDY	35 second	Midway islands	-11		second	Noronha		
									PDL	57	* Azores	-1	

HOW TO USE THE DAYLIGHT SAVING FUNCTION

Some areas have daylight savings where the time is set forward to gain an extra hour of sunlight. Astron has an easy daylight saving function that turns daylight saving on or off.

- Press BUTTON A. The indicator hand will move to either DST (for Daylight Savings on) or the '.' (for Daylight Savings off).
- 2. Press and hold BUTTON C for approx. 3 seconds to turn it either on or off.
- 3. The main hands will move forward (on), or backward (off) one hour.

FLIGHT MODE

GPS reception may influence the aeroplanes electronic equipment so GPS Astron has a flight mode you can activate when travelling on an aeroplane.

TURN FLIGHT MODE ON OR OFF

- 1. Press BUTTON B.
- 2. Then press and hold BUTTON C.
- 3. The indicator hand will move to the aeroplane when Flight Mode is switched on or will move to the Power Reserve Indicator when it is switched off.

HOW TO SET THE SUB-DIAL

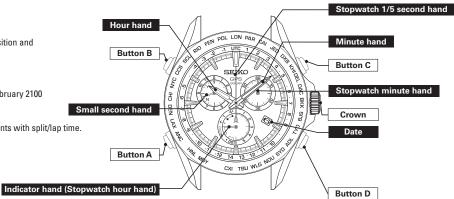
The bottom sub-dial displays the time in a 24-hour system. This dial works independently of the main hands, so it can be set on a second timezone.

To change the sub dial time

- 1. Unscrew the crown. Pull the crown out to the first click.
- 2. Press BUTTON B to advance the time, or press BUTTON C to decrease the time.
 When the button is kept pressed for 2 seconds or longer the sub-dial hands will move continuously until a button is pressed again then they will cease moving.

SOLAR GPS CHRONOGRAPH (8X82)

- Solar Powered by any light source.
- GPS Connectivity Connect to satellites to pinpoint your position and adjust timezone accordingly*
- Flight Mode turn on and off during flights.
- Perpetual Calendar Adjusts the date automatically until February 2100 including leap years and short months
- Stopwatch Measures 6 hours in 1/5th of a second increments with split/lap time.
- World Time
- Power Save Mode Astron sleeps when not in sufficient light to conserve energy, and when exposed to light will wake up and relay to the current time.
- * Time zone data as of January 2014. Changes to time zones occurring after this date are not programed and manual adjustment may be required



HOW TO ADJUST TIME USING GPS SIGNALS

- 1. Ensure you are outdoor under an open sky with good visibility. Away from trees, buildings bridges etc. Ensure Astron is out of flight mode - follow the steps detailed later in this guide.
- 2. Press and hold BUTTON B . The small second hand will move to the 60 second mark and stop briefly. It will then move to the 30 second mark. Once the small second hand moves to the 30 second mark release BUTTON B.
- 3. The small second hand will then move around the dial pointing at the number detailed on the outer ring of this indicating how many satellites it is connected to. A minimum of 4 satellites is required for a successful timezone adjustment. The GPS Signal and Time change can take up to 2 minutes.
- 4. After Astron connects to satellites the small second hand will move to Y for a successful connection, or N for an unsuccessful connection. The Y & N are indicated inside the small second hand dial.
- 5. The main hands on Astron will move to the correct time based on your position.

MANUAL TIME ADJUSTMENT & WORLD TIME FUNCTION

In places where the GPS timezone change is not possible Astron can be set manually without the need to connect to a satellite. This function can also be used as a World Timer.

- 1. Pull the crown out to the first click. The 1/5th of a second hand will move and point to the current timezone set.
- 2. Turn the crown forward or backward and the 1/5th of a second hand will point to the next timezone detailed on the inner ring, or city detailed on the bezel (model dependant) and instantly move the hands to that timezone.
- 3. Once you have selected your desired timezone push the crown back in flush to the case.

Use the below table to discover world timezones.

ving list shows the relationship between displays of the bezel and dial ring and time difference er to the second hand positions below to set the time zone or to check the time zone setting.

ght Saving Time) is used in time zones with a \star mark. Howe Island time zone in Australia with a $\dot{\chi}$ mark, the time is advanced by 30 minutes while DST (Daylight Sacorresponds to DST in the Lord Howe Island time zone.



City code	Display of time difference	City name	UTC ± hours	City	Display of time difference	City name	UTC ± hours		City code	Display of time difference	City name	UTC ± hours
LON	UTC	★London	0	BJS	8	Beijing	+8		HNL	-10	Honolulu	-10
PAR	1	★Paris/★Berlin	+1	-	•	Eucla	+8.75	l	-	•	Marquesas Islands	-9.5
CAI	2	★ Cairo	+2	TYO	9	Tokyo	+9		ANC	-9	★ Anchorage	-9
JED	3	Jeddah	+3	ADL	•	★ Adelaide	+9.5	l	LAX	-8	★ Los Angeles	-8
-	•	★ Tehran	+3.5	SYD	10	★ Sydney	+10		DEN	-7	★ Denver	-7
DXB	4	Dubai	+4	-		☆Lord Howe Island	+10.5	ľ	CHI	-6	★ Chicago	-6
-		Kabul	+4.5	NOU	11	Nouméa	+11	l	NYC	-5	★ New York	-5
KHI	5	Karachi	+5	-	•	Norfolk Island	+11.5	Ì	ccs		Caracas	-4.5
DEL	•	Delhi	+5.5	WLG	12	★ Wellington	+12	lÌ	SCL	-4	★ Santiago	-4
-	•	Kathmandu	+5.75	-		Chatham Islands	+12.75	l	-		★St. John's	-3.5
DAC	6	Dhaka	+6	TBU	13	Nuku'alofa	+13	Ì	RIO	-3	★ Rio de Janeiro	-3
-		Yangon	+6.5	CXI	14	Kiritimati	+14	l	FEN	-2	Fernando de	-2
BKK	7	Bangkok	+7	-	-12	Baker Island	-12	I	FEIN		Noronha	-2
om UTC an	e Subject t	o change owing to	models.	MDY	-11	Midway islands	-11	l	PDL	-1	★ Azores	-1

HOW TO USE THE DAYLIGHT SAVING FUNCTION

Some areas have daylight savings where the time is set forward to gain an extra hour of sunlight. Astron has an easy daylight saving function that turns daylight saving on or off.

- 1. Pull the crown out to the first click. The bottom dial's hand will move to either DST (for Daylight Savings on) or the '.' (for Daylight Savings off).
- 2. Press and hold BUTTON B for approx. 3 seconds to turn it either on or off.
- 3. The hands will move forward (on), or backward (off) one hour.

FLIGHT MODE

GPS reception may influence the aeroplanes electronic equipment so GPS Astron has a flight mode you can activate when travelling on an aeroplane.

TURN FLIGHT MODE ON OR OFF

- 1. Press and hold BUTTON A for approx.. 5 seconds.
- 2. The indictor hand in the bottom dial will move to the image of the plane located on the left side of the outer ring.
- 3. To turn flight mode off, press and hold BUTTON A for approx. 5 seconds. The hand will move back to the power reserve indicator

STOPWATCH MODE

When using the stopwatch the hands will move and behave differently to normal time mode.

- The large second hand becomes the 1/5th of a second hand
- The dial on the right side is the Stopwatch minute hand
- The bottom dial and indicators become the hour hand
- 1. To start the stopwatch press BUTTON C
- 2. To stop the stopwatch press BUTTON C
- 3. To reset the stopwatch press BUTTON D

SPLIT/LAP TIME

While the stopwatch is in operation press BUTTON D to split time. The stopwatch hands will freeze to indicate time. Press BUTTON D to release split time and the stopwatch will catch up and continue on to real time.

NOTE - While the stopwatch is in operation the GPS timezone function will not work.

SERVICE NETWORK FOR WARRANTY REPAIRS

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Service Agent for Seiko, Pulsar, Lorus

Watch World

226A Bush Road, Albany,

Auckland NZ 0632

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New Zealand 0745

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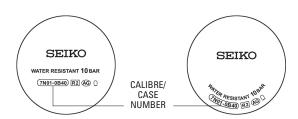
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Email: admin@watchworld.co.nz



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